



## Carl Moyer Memorial Air Quality Standards Attainment Program

### Marine Project Fact Sheet

The Bay Area Air Quality Management District (Air District) is accepting applications for the Carl Moyer Memorial Air Quality Standards Attainment Program (CMP) beginning **July 11, 2016**. Marine projects eligible for funding include main or auxiliary engine replacements, engine remanufacture kits, engine retrofits, and new vessel purchases.

Apply on-line at: [www.baaqmd.gov/moyer](http://www.baaqmd.gov/moyer)

#### Before starting your application:

- Read this Fact Sheet.
- Understand any state fleet or harbor craft rules that may apply to your fleet. Information is available at ARB’s website: <http://www.arb.ca.gov/ports/marinevess/harborcraft.htm>
- Start collecting information on your equipment and engine needed for your application.
- Contact your engine or equipment dealer to discuss possibilities for your equipment.
- Review Chapter 12 “Marine Vessels” of the current California Air Resources Board (ARB) 2011 Carl Moyer Program Guidelines at: <http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm>
- Contact Yu Zhang Liu at (415) 749-8430 or [yliu@baaqmd.gov](mailto:yliu@baaqmd.gov) with any questions.

### CMP Marine Project Quick-Reference Guide

| Eligible Projects                   |  |
|-------------------------------------|--|
| Eligible marine projects            | <ul style="list-style-type: none"> <li>– <b>Repower:</b> Replace an in-use engine with a new, lower-emission engine</li> <li>– <b>Remanufacture Kit:</b> Installation of engine remanufacture kit that reduces the engine’s emissions</li> <li>– <b>New Vessel Purchase:</b> Purchase of a new marine vessel with propulsion and auxiliary engines certified to be at least 30% cleaner than the applicable oxides of nitrogen (NO<sub>x</sub>) emission standard; funding for a new purchase is very limited and must be considered on a case-by-case basis.</li> <li>– <b>Retrofit:</b> Installation of an ARB-verified diesel emission control strategy; funding for a retrofit device is very limited and must be considered on a case-by-case basis.</li> </ul>                                       |
| Eligible marine engines and vessels | <ul style="list-style-type: none"> <li>– Propulsion or auxiliary engines 25 horsepower or greater</li> <li>– All new replacement engines must be certified to meet the appropriate EPA engine emission standard and provide at least a 15% NO<sub>x</sub> reduction compared to the old engine.</li> <li>– Engines less than or equal to 100 horsepower are required to meet Tier 3 EPA standards, unless it can be demonstrated that the technology is technically infeasible or unavailable.</li> <li>– Non-recreational vessels including, barge, crew, supply, dredge, excursion (tour), ferries, tugboats, towboats, commercial or charter fishing, pilot, work boats, and other vessels not subject to the Harbor Craft Regulation (HCR) in-use compliance requirements</li> </ul>                   |
| Area of activity                    | <p>The vessel must operate within California Coastal Water Boundaries AND within the Air District jurisdiction (Alameda, Contra Costa, Marin, San Mateo, San Francisco, Santa Clara, and Napa counties, and the southern portions of Solano and Sonoma counties). See Chapter 12 Page 4 in the CMP guidelines for coordinates of California Coastal boundaries. District boundaries range south of Bodega Bay through San Mateo County.</p> <p>CMP guidelines: <a href="http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm">http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm</a><br/> Air District Boundaries: <a href="https://www.google.com/maps/d/viewer?mid=zkpGqewzKbdw.kb6GXWwrbk6g&amp;msa=0">https://www.google.com/maps/d/viewer?mid=zkpGqewzKbdw.kb6GXWwrbk6g&amp;msa=0</a></p> |

The Air District will prioritize projects that reduce emissions in the following impacted communities: 1) Concord, 2) Richmond/San Pablo, 3) Western Alameda County, 4) San Jose, 5) Livermore, 6) Eastern San Francisco, 7) San Rafael, 8) Vallejo, and 9) Antioch/ Pittsburg.



**Eligible Funding and Project Costs**

| Maximum reimbursement percentage of total project costs eligible for Carl Moyer Program funding                | Project Type   |                                     | Maximum Eligible Funding |
|--|--|-------------------------------------|--------------------------|
|  | Barge, crew, supply, dredge, excursion, ferry, towboat, tugboat            | Engine repower or remanufacture kit |                          |
| Fishing, pilot, work boat, other vessels not subject to Harbor Craft Regulation in-use compliance requirements | Engine repower or remanufacture kit compliant to Tier 2 emission standards |                                     | 80%                      |
|  | Compliant to EPA Tier 3 emission level                                     |                                     | 85%                      |
| Any vessel propulsion engine repower with an off-road Tier 2 or cleaner engine                                 | Case-by-case basis*  |                                     |                          |
| CARB-verified marine retrofit device   | Case-by-case basis*  |                                     |                          |
| New vessel purchase  | Case-by-case basis*  |                                     |                          |
| Shore power shore side: 50% of transformer and other equipment between vessel and transformer                  |  |                                     |                          |
| Shore power ship side: 100% of retrofit costs; percent of transformer costs                                    |  |                                     |                          |

|   |  |
|---|--|
| <p><b>Eligible marine costs</b></p>                           | <ul style="list-style-type: none"> <li>- The capital cost of the new engine or remanufacture kit</li> <li>- Purchase of or modifications to the cooling system; fuel and exhaust system; wiring, panel, and harness system; power take-offs; propulsion control system; gauges and alarms; and radiator and ventilation, if attached to or integral to the functioning of funded engine</li> <li>- <b>Gears / transmissions may be eligible on a case-by-case basis. You must include a written statement from the engine dealer explaining why new gears and transmission are required and why the current equipment will not work.</b></li> <li>- Frames needed to be extended or other parts needed to be cut or modified in order to accommodate the new engine, as well as paint or coating needed to protect those specific areas that were cut or modified</li> <li>- Tax and transport for eligible parts or costs</li> <li>- Labor for installation of or modification to parts eligible for funding</li> <li>- Retrofit device and installation</li> </ul>   |
| <p><b>Ineligible marine costs</b></p>                         | <ul style="list-style-type: none"> <li>- Rudders or propellers</li> <li>- Steering system</li> <li>- Sea trials and dry docking</li> <li>- Paint, coatings, or hull work not directly related to the engine repower</li> <li>- Tax and transport for ineligible parts or costs</li> <li>- Labor for installation of or modification to parts ineligible for funding</li> <li>- Any parts or labor typically included as part of routine vessel or engine overhaul, maintenance, repair, or upkeep</li> <li>- These and other items may be eligible for funding on a case-by-case basis if it can be proven that they are not part of the typical vessel overhaul, repair, upkeep or maintenance and are a necessary part of the engine repower.</li> </ul>   |
| <p><b>Attachments Required for the Application</b></p>        |  |
| <p><b>Quote(s) for the equipment to be funded:</b></p>        | <p>Quotes must include:</p> <ul style="list-style-type: none"> <li>- Itemized list of eligible project costs</li> <li>- EPA Engine Family Number</li> <li>- Hourly rate and number of hours for labor charges</li> </ul>   |
| <p><b>EPA Certificate of Conformity</b></p>                   | <p>(For engine replacement projects only)<br/>You must provide the EPA Certificate of Conformity for the engine being requested.</p>   |
| <p><b>Usage documentation</b></p>                             | <p>You must provide records documenting usage from the previous two continuous years. These records must show the usage of each engine for which funds are being requested. Acceptable usage documentation includes hour logs taken from a functional hour meter.</p>  |
| <p><b>Initial ARB Harbor Craft Report</b></p>                 | <p>You must provide a copy of the initial <b>ARB Harbor Craft Report</b> required by the State of California: <a href="http://www.arb.ca.gov/ports/marinevess/harborcraft/reporting.htm">http://www.arb.ca.gov/ports/marinevess/harborcraft/reporting.htm</a>. As of February 28, 2009 all commercial harbor craft owner/operators were required to keep records for each vessel, and to install (if not already installed) a non-resettable hour meter on each engine. Vessel owner/operators will need to keep a copy of their initial report and yearly records on the vessel or in a central dockside location to be made available upon request by ARB staff.</p> <p><b>If you haven't completed a report, contact ARB to get started:</b></p> <ul style="list-style-type: none"> <li>• <b>Kirk Rosenkranz</b> – Phone: (916) 327-7843 / E-mail: <a href="mailto:krosenkr@arb.ca.gov">krosenkr@arb.ca.gov</a></li> </ul> <p><b>For more information about record keeping:</b><br/><a href="http://www.arb.ca.gov/ports/marinevess/harborcraft.htm">http://www.arb.ca.gov/ports/marinevess/harborcraft.htm</a></p> |
| <p><b>Proof of Insurance</b></p>                              | <p>You must provide documentation of general liability and workers compensation insurance and machinery insurance equal to the full replacement value of the equipment. Owner-operator fishing vessels are not required to carry insurance.</p>  |
| <p><b>Project Requirements</b></p>                            |  |
| <p><b>Project life &amp; equipment usage requirements</b></p> | <ul style="list-style-type: none"> <li>- Minimum of three (3) years. Equipment must remain in service for the project life.</li> <li>- The project must be completed (engine installed and operational) at least three (3) years prior to the associated Harbor Craft Regulation Compliance date.<br/><i>(See the ARB Harbor Craft Regulation Compliance Schedule shown below)</i></li> </ul>  |
| <p><b>Cost-effectiveness</b></p>                              | <p>Projects must meet a cost-effectiveness of <b>\$18,260</b> per weighted ton of NOx, ROG and PM10 reduced to be eligible.</p>  |

| <b>Application Instructions</b> |   |
|---------------------------------|---|
| Complete an application         | Apply online at <a href="http://www.baaqmd.gov/moyer">www.baaqmd.gov/moyer</a> .  |
| After you apply                 | Applications that are determined to be <b>complete</b> will be evaluated on a first-come, first-served basis until all funding has been allocated. All applicants will receive application completeness notifications within 5 business days via email from District staff. If you do not hear from the District within 5 business days, please contact the District immediately. |
| <b>Questions?</b>               | For questions or more information, please contact Yu Zhang Liu at (415) 749-8430 or <a href="mailto:yliu@baaqmd.gov">yliu@baaqmd.gov</a>  |

# ARB Commercial Harbor Craft Regulation Information

Webpage: <http://www.arb.ca.gov/ports/marinevess/harborcraft.htm>

| ARB Commercial Harbor Craft Regulation   |  |                 |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
|--|--|-----------------|-------------------|---------------------------------|-----------------|------------------|--------|------------|------------------|-----------------|------------|-------------|-------|------------|-------------|------------------|------------|-------------|--------|------------|-------------|------------------|------------|-----------------------------|-------|------------|---|--------|------------|---|------------------|------------|------|--------|------------|------|------------------|------------|-------------|-------|------------|------|-------|------------|------|-------|------------|------|-------|------------|------|-------|------------|------|-------|------------|
| <p><b>What qualifies as harbor craft?</b></p> <p><b>Who is exempt?</b></p>   | <p>All owners/operators of commercial harbor craft that operate in California Regulated Waters are required to comply with the reporting requirement of the regulation. Commercial harbor craft include, but are not limited to, ferries, excursion vessels, tugboats (including ocean-going tugboats), towboats, crew and supply vessels, work boats, pilot vessels, barges, and commercial and charter fishing boats.</p> <p><b>EXEMPT:</b> Harbor craft engines between 25 and 50 horsepower are exempt from and are not required to be repowered three years prior to the compliance deadlines in the tables below to be eligible for Carl Moyer Program funding.</p>  |                 |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| <p><b>What types of vessels are required to replace engines?</b></p>   | <p>Ferries, excursion vessels, tugboats (including ocean-going tugboats), towboats, crew and supply vessels and barges / dredges. Compliance dates for these engines are listed below. For more information about the HCR, please visit:<br/> <a href="http://www.arb.ca.gov/ports/marinevess/harborcraft.htm#background">http://www.arb.ca.gov/ports/marinevess/harborcraft.htm#background</a></p>  |                 |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| <p><b>Contact for Harbor Craft Regulation Questions</b></p>  | <p><b>Kirk Rosenkranz</b> – Phone: (916) 327-7843 / E-mail: <a href="mailto:krosenkr@arb.ca.gov">krosenkr@arb.ca.gov</a><br/>                     Website: <a href="http://www.arb.ca.gov/ports/marinevess/harborcraft.htm">http://www.arb.ca.gov/ports/marinevess/harborcraft.htm</a></p>   |                 |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| <p><b>Regulation compliance schedule for engine replacement</b></p> <p><i>must meet EPA Tier 2 or Tier 3 emission standards—cleanest available</i></p> | <p><b>Compliance Dates for Engines on Ferries, Excursion Vessels, Tugboats, Towboats, and Push Boats located outside the South Coast AQMD</b></p> <table border="1"> <thead> <tr> <th>Engine Model Year</th> <th>Total Annual Hours of Operation</th> <th>Compliance Date</th> </tr> </thead> <tbody> <tr> <td>1975 and earlier</td> <td>≥ 1500</td> <td>12/31/2009</td> </tr> <tr> <td>1975 and earlier</td> <td>≥300 and &lt; 1500</td> <td>12/31/2010</td> </tr> <tr> <td>1976 - 1985</td> <td>≥1500</td> <td>12/31/2011</td> </tr> <tr> <td>1976 - 1985</td> <td>≥ 300 and &lt; 1500</td> <td>12/31/2012</td> </tr> <tr> <td>1986 - 1995</td> <td>≥ 1500</td> <td>12/31/2013</td> </tr> <tr> <td>1986 - 1995</td> <td>≥ 300 and &lt; 1500</td> <td>12/31/2014</td> </tr> <tr> <td>Ferries Only<br/>1996 - 1999</td> <td>≥ 300</td> <td>12/31/2014</td> </tr> <tr> <td>Vessels Other Than Ferries<br/>1996 - 1999</td> <td>≥ 1500</td> <td>12/31/2015</td> </tr> <tr> <td>Vessels Other Than Ferries<br/>1996 - 1999</td> <td>≥ 300 and &lt; 1500</td> <td>12/31/2016</td> </tr> <tr> <td>2000</td> <td>≥ 1500</td> <td>12/31/2015</td> </tr> <tr> <td>2000</td> <td>≥ 300 and &lt; 1500</td> <td>12/31/2016</td> </tr> <tr> <td>2001 - 2002</td> <td>≥ 300</td> <td>12/31/2017</td> </tr> <tr> <td>2003</td> <td>≥ 300</td> <td>12/31/2018</td> </tr> <tr> <td>2004</td> <td>≥ 300</td> <td>12/31/2019</td> </tr> <tr> <td>2005</td> <td>≥ 300</td> <td>12/31/2020</td> </tr> <tr> <td>2006</td> <td>≥ 300</td> <td>12/31/2021</td> </tr> <tr> <td>2007</td> <td>≥ 300</td> <td>12/31/2022</td> </tr> </tbody> </table> <p><b>[Note:</b> For example, if a 1982-model year diesel engine on a tugboat operating in Regulated California Waters is used for 750 hours in 2011, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6)(C) by December 31, 2012].</p> |                 | Engine Model Year | Total Annual Hours of Operation | Compliance Date | 1975 and earlier | ≥ 1500 | 12/31/2009 | 1975 and earlier | ≥300 and < 1500 | 12/31/2010 | 1976 - 1985 | ≥1500 | 12/31/2011 | 1976 - 1985 | ≥ 300 and < 1500 | 12/31/2012 | 1986 - 1995 | ≥ 1500 | 12/31/2013 | 1986 - 1995 | ≥ 300 and < 1500 | 12/31/2014 | Ferries Only<br>1996 - 1999 | ≥ 300 | 12/31/2014 | Vessels Other Than Ferries<br>1996 - 1999 | ≥ 1500 | 12/31/2015 | Vessels Other Than Ferries<br>1996 - 1999 | ≥ 300 and < 1500 | 12/31/2016 | 2000 | ≥ 1500 | 12/31/2015 | 2000 | ≥ 300 and < 1500 | 12/31/2016 | 2001 - 2002 | ≥ 300 | 12/31/2017 | 2003 | ≥ 300 | 12/31/2018 | 2004 | ≥ 300 | 12/31/2019 | 2005 | ≥ 300 | 12/31/2020 | 2006 | ≥ 300 | 12/31/2021 | 2007 | ≥ 300 | 12/31/2022 |
| Engine Model Year  | Total Annual Hours of Operation  | Compliance Date |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 1975 and earlier   | ≥ 1500   | 12/31/2009      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 1975 and earlier   | ≥300 and < 1500  | 12/31/2010      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 1976 - 1985  | ≥1500  | 12/31/2011      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 1976 - 1985  | ≥ 300 and < 1500   | 12/31/2012      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 1986 - 1995  | ≥ 1500   | 12/31/2013      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 1986 - 1995  | ≥ 300 and < 1500   | 12/31/2014      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| Ferries Only<br>1996 - 1999  | ≥ 300  | 12/31/2014      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| Vessels Other Than Ferries<br>1996 - 1999  | ≥ 1500   | 12/31/2015      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| Vessels Other Than Ferries<br>1996 - 1999  | ≥ 300 and < 1500   | 12/31/2016      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 2000   | ≥ 1500   | 12/31/2015      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 2000   | ≥ 300 and < 1500   | 12/31/2016      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 2001 - 2002  | ≥ 300  | 12/31/2017      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 2003   | ≥ 300  | 12/31/2018      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 2004   | ≥ 300  | 12/31/2019      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 2005   | ≥ 300  | 12/31/2020      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 2006   | ≥ 300  | 12/31/2021      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |
| 2007   | ≥ 300  | 12/31/2022      |                   |                                 |                 |                  |        |            |                  |                 |            |             |       |            |             |                  |            |             |        |            |             |                  |            |                             |       |            |   |        |            |   |                  |            |      |        |            |      |                  |            |             |       |            |      |       |            |      |       |            |      |       |            |      |       |            |      |       |            |

**ARB Commercial Harbor Craft Regulation**

| <b>Compliance Dates for Engines on Crew and Supply Vessels Statewide</b>  |                          |  |                        |
|---|--------------------------|--|------------------------|
| <b>Regulation compliance schedule for engine replacement</b><br><br><i>must meet EPA Tier 2 or Tier 3 emission standards—cleanest available</i> | <b>Engine Model Year</b> | <b>Total Annual Hours of Operation</b> | <b>Compliance Date</b> |
|   | 1985 and earlier         | > 1500                                 | 12/31/2011             |
|   | 1985 and earlier         | > 300 and < 1500                       | 12/31/2012             |
|   | 1986 – 1995              | > 1500                                 | 12/31/2013             |
|   | 1986 – 1995              | > 300 and < 1500                       | 12/31/2014             |
|   | 1996 – 2000              | > 1500                                 | 12/31/2015             |
|   | 1996 – 2000              | > 300 and < 1500                       | 12/31/2016             |
|   | 2001 – 2002              | > 300                                  | 12/31/2017             |
|   | 2003                     | > 300                                  | 12/31/2018             |
|   | 2004                     | > 300                                  | 12/31/2019             |
|   | 2005                     | > 300                                  | 12/31/2020             |
|   | 2006                     | > 300                                  | 12/31/2021             |
|   | 2007                     | > 300                                  | 12/31/2022             |

  

| <b>Compliance Dates for pre-Tier 1 and Tier 1 Engines on Dredge and Barge Vessels Statewide</b>   |                          |  |                        |
|---|--------------------------|--|------------------------|
| <b>Regulation compliance schedule for engine replacement</b><br><br><i>must meet EPA Tier 2 or Tier 3 emission standards—cleanest available</i> | <b>Engine Model Year</b> | <b>Total Annual Hours of Operation</b> | <b>Compliance Date</b> |
|   | 1975 and earlier         | >80                                    | 12/31/2011             |
|   | 1976 -1980               | >80                                    | 12/31/2012             |
|   | 1981 - 1985              | >80                                    | 12/31/2013             |
|   | 1986-1990                | >80                                    | 12/31/2014             |
|   | 1991-1995                | >80                                    | 12/31/2015             |
|   | 1996-1999                | >80                                    | 12/31/2016             |
|   | 2000 -2001               | >80                                    | 12/31/2017             |
|   | 2002                     | >80                                    | 12/31/2018             |
|   | 2003                     | >80                                    | 12/31/2019             |
|   | 2004                     | >80                                    | 12/31/2020             |
|   | 2005                     | >80                                    | 12/31/2021             |
|   | 2006                     | >80                                    | 12/31/2022             |